Continuous Process Improvement Sequence Capstone

Possible Problem/Opportunity: Get with the individual who will most likely be the Team Leader and have a discussion of the potential problem to get a general idea of the potential problem. The discussion will also help you identify a data collection plan in order to validate a problem exists.   Once you feel there is a problem based on the discussion, use the SIPOC or SWOT tool to help narrow down the focus as well as identify potential team members. You may need to do a Gemba Walk and build a spaghetti chart and/or gather other relevant data of the issue and/or clearly find elements of wastes. All of this information will help you start building the draft Problem Statement (PS)/Opportunity Statement (OS).

Note: Build the Charter and steps 1-3 before the event.

Charter: Contains the Champion & Process owner, draft PS/OS, Impact statement, scope, brief of the current state, current performance, team members & stakeholders.

Note: You can go to the Champion at this point if you like, but you will have to do a separate Vector Check (VC) after Step 3 if you don't lump the Charter and Steps 1-3 together in your first meeting w/ the Champion. A great technique is to obtain the Champion's signature to the Charter, regardless of when you present it.

Step 1 Clarify & Validate the Problem: Refined problem statement based on further data collection (if applicable). Make sure the PS has the following: when is the problem happening, where is it happening, what is happening, who/what is affected & so what – Impact. Be sure to try and include the Voice of the Customer (VOC). The VOC can be an AFI, local standard or other governance not being met, a missed metric target, a failed inspection etc. Remember no opinions and no solutions here.

Step 2 Breakdown Problem/ID Performance Gaps: What is the gap compared to the VOC (simple bar chart with the current state compared to the VOC w/ a goodness indicator.

Step 3 Set Improvement Target(s): What is the target/desired outcome of the event. Use the SMART criteria discussed in class. This chart can look just like the chart in Step 2 but the VOC now becomes the target or other incremental targets the team decides.

Vector Check: If you did not lump Steps 1-3 in with the Charter signing by the Champion, you need to do a VC here before moving onward.

Process Sequence Map (PSM): This needs to be done by the person or people who actually work the process being looked at. Usually that is the team leader plus 1 or 2 others. Make sure to always focus on the current state and not on what is "supposed to be the process". Once completed, have them identify elements of waste and all the Value and Non-Value added (VA/NVA) steps.

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Note: This step can be done before the team gets together in the event. If so, then you need to have the other team members validate the PSM to make sure it is an accurate reflection of the Current State. If you decide to do the PSM during the event, plan on adding at least a day to the overall event duration. Now it's time to assemble the team and conduct the event.

Pre-Root Root Cause Analysis (Step 4) things to do: Before diving into Step 4 below, I like to take a few minutes and have the team step back and look at the whole PSM where they have marked all the VA/NVA and other elements of waste. If you did not have them do this when you first did the PSM, make them do it now. Also have them look at areas they feel have a good opportunity for improvement (Kaizen). This helps a lot when it comes time to brainstorm for POSSIBLE CAUSES to the problem.

Step 4 Determine the Root Cause:

 Brainstorm: Time to brainstorm for possible causes using the Fishbone, Silent, or Open Brainstorming. Remember that you will have to affinitize the sticky notes if you did not use the fishbone.

 Multi-vote: Next you need to Multi-vote by counting the number of possible causes submitted (not the affinitized categories or the fishbone ribs) and dividing that total by 3 (N/3). Always give a minimum of three votes despite what the N/3 shows.

 Pareto Chart: Use a Pareto chart to show how the multi-voting worked out. Explain the Pareto principle to the team but also give them an opportunity to expand beyond the 20 percent if they so choose.

 5 Whys: Once you've identified the 20% (or more), you need to apply the 5 Whys to each one fo the probable causes selected.

Step 5 Develop Countermeasures:

 Brainstorm: Brainstorm for each Root Cause identified in Step 4.

 Prioritize the CMs: Prioritize using a tool PICK/Decision Matrix

Note: Remember that CMs can impact more than 1 RC. Don't forget to document the RC each CM is expected to fix.

Vector Check: Time to get the Champion into the room and have him/her an update on the work done since the last VC. Make sure to project this on the Champion's calendar as early as possible. This VC should be just a quick update and approval and/or vectoring for the work done in Steps 4 – 5.

Note: If you can't get the Champion to do a VC at this time, go ahead and press on to Step 6 but at least try to send an email or other form of communication to let the Champion know of the efforts thus far just in case the team is going in the wrong direction.

Note: Event team members may confuse a CM with the action plans in Step 6. Please remember that CMs are broad concepts/ways ahead that address the root causes identified.

Specifics action plans for each CM will be developed in Step 6. For example, RC = Lack of training leads to CM = Improve training program.   But, teams may want to jump ahead to action plans like…develop/revise training curriculum, train all employees, etc. All these actions could be summarized as the CM listed of improving the training program.

Step 6 See Countermeasures Through:
>	*Build the Action Plans*: Details of how each CM will be implemented. Make sure you have OPR & Due Dates
>	*Prioritize*: each of the action items on the action plan based on critical path or chain of required sequencing

Note Do not use the PICK chart for this because that will negate the prioritization you already did in Step 5. This prioritization determines those things that must be accomplished ahead of others. For example, you must put socks on your feet before putting your shoes on and your shoes must be on your feet before you tie them.

Step 7 Confirm Results: Copy the chart you used in Step 3 and replace the target with the actual results. Make sure you do not introduce any new results that were not already identified in Step 3. For example, if you said decreased cost and defects were your targets in Step 3, then you should not see a result showing decreased time, distance, etc.

Step 8 Standardize Successful Processes: At a minimum, the following things should be done and documented on the A3.
>	*Updated Governance*: This includes AFIs, TOs, OIs, Policies, business rules etc.
>	*Review of Action Plan Status*: At least every 30 days, have the Champion updated on Action Plan status.
>	*Key Performance Indicators*: Make the team choose or develop a metric (also reviewed by the Champion every 30 days) related to the performance of the problem they just fixed.
>	*Standard Work*: Make sure the team has built and is using Standard Work for the new process.
>	*Replicate*: If the change was successful, share it with others by: loading into CPI MT, advertising, nominate for best practice, IG reports, best practices, etc.